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Process for the preparation of aqueous emulsions of blocked polyisocyanates

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Abstract:

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This invention relates to a process for the preparation of aqueous emulsions of blocked (poly)isocyanates, this process comprising the steps consisting successively in:

- a) placing an isocyanate composition containing free isocyanate functions in contact with at least one blocking agent A in the presence of a surfactant B and an aqueous phase, the said isocyanate composition being added gradually to a stock containing at least some of the aqueous phase and at least some of the blocking agent; and optionally,
- b) subjecting the mixture obtained to a shear (speed gradient) of greater than 1000 s^{-1} , preferably greater than $20,000\text{ s}^{-1}$ and less than $1,000,000\text{ s}^{-1}$, preferably less than $200,000\text{ s}^{-1}$, and
- c) repeating step b), optionally after step a) has been repeated, until a stable emulsion is obtained whose particles have a Sauter diameter of greater than $0.1\text{ }\mu\text{m}$, preferably $0.2\text{ }\mu\text{m}$, and less than $5\text{ }\mu\text{m}$, preferably less than $2\text{ }\mu\text{m}$, and a dispersion width of less than $5\text{ }\mu\text{m}$.

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Figs.: none

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